

YELLOWSTONE NATIONAL PARK
REPORT TO THE
WORLD HERITAGE COMMITTEE
STATUS OF KEY ISSUES
JANUARY 2008

INTRODUCTION

The World Heritage Committee listed Yellowstone National Park as a World Heritage Site in Danger on December 5, 1995. In its report, the Committee cited specific threats and dangers that were already affecting, were beginning to affect, or had potential to seriously compromise the outstanding universal values for which Yellowstone was inscribed as one of the first World Heritage Sites. In June 2003, the Committee congratulated the park for "the considerable efforts" that went into "the progress made in addressing all the key issues that led to Danger Listing of the site..." and considers "...the reasons for retaining the site on this List no longer exist" and as a consequence, Yellowstone National Park was removed from the In Danger List.

However, the World Heritage Committee (WHC) invited Yellowstone National Park to 1) continue its commitment to address the original issues; 2) to provide the WHC with recovery plans regarding those issues; 3) continue to provide progress reports to WHC on the original threats, and to specifically seek public involvement in these issues.

In keeping with the Committee's request, this document is the fourth progress report following removal from the list, and includes plans and actions currently planned or underway, that specifically seek to redress the 1995 threats and dangers.

See: <http://www.nps.gov/yell/index.htm> and
<http://www.nps.gov/yell/planyourvisit/world-heritage-committee-report.htm>.

In all resource cases described below, the park is guided first by the relevant statutory laws of the United States emphasizing parks such as the Yellowstone Organic Act (16 USC 21-22), NPS Organic Act (16 USC 1 *et seq*), General Authorities Act (16 USC 1a-1), National Parks and Recreation Act (16 USC 1a-7), the "Redwood Act" (16 USC 1a-1), and the National Parks Omnibus Management Act (16 USC 5901 *et seq*). In addition, other national statutes in part focus on parks such as the Clean Air Act (42 USC 7401 *et seq*), Federal Water Pollution Control Act (33 USC 1251 *et seq*), Wilderness Act (16 USC 1131 *et seq*), National Environmental Policy Act (42 USC 4332 *et seq*), Endangered Species Act (7 USC 136 *as amended*), Geothermal Steam Act (30 USC 1001 *et*

seq), Antiquities Act (16 USC 431 *et seq*), Historic Sites Act (49 Stat. 666), National Historic Preservation Act (80 Stat. 915 *as amended*), Archeological and Historic Preservation Act (88 Stat. 174), are examples among many others.

Any of these statutes can be retrieved from:

<http://data2.itc.nps.gov/npspolicy/index.cfm>

In many instances, Presidential Executive Orders and “Rules,” or Regulatory Law, are more specific and focused than statutes and serve as detailed operating principles for the national parks.

For Executive Orders see:

<http://www.archives.gov/federal-register/executive-orders/>

For the Code of Federal Regulations see:

<http://data2.itc.nps.gov/npspolicy/index.cfm>

www.gpoaccess.gov/cfr/index.html

Finally, relevant governance for National Park Service activities that are the most detailed are policies and Director’s Orders that are available and can be readily located at:

<http://data2.itc.nps.gov/npspolicy/index.cfm>

Progress on 1995 Threats

MINING ACTIVITIES

Threat in 1995: The New World Mine was a major Crown Butte Mines, Inc. proposal to reopen an older mining area on patented and U.S. Forest Service (USFS) lands to new gold and silver harvest. The site was adjacent to the Absaroka-Beartooth Wilderness area in the Gallatin National Forest, and upstream from Yellowstone National Park; it was perceived to be a major threat to the resources of the National Forest Wilderness and Yellowstone National Park.

Outcome: The US government and Crown Butte Mines, Inc. signed an agreement in 1996 to refrain from mining these lands, and the Congress appropriated \$65 million for the acquisition of lands and interests, including cleanup of toxic overburden and tailings left over from a century of previous mining activity.

Status: The new mining proposal was shelved and most of the property was transferred to public domain. Cleanup of toxic materials from past mining started in 2000 and was expected to take seven years, and post-project maintenance will be funded in perpetuity. In 2005, significant

progress was made on the McLaren Mill and tailings and the Republic Smelter sites. The USFS and U.S. Environmental Protection Agency (USEPA) joined forces to completely clean up the Republic site, and the USFS reclaimed the portion of the McLaren site that is situated on public property. The State of Montana Department of Environmental Quality (MTDEQ) has identified a potential depository site for the McLaren mine tailings and funding was secured by the US National Park Service (USNPS) to drill three groundwater monitoring wells to obtain groundwater information to determine whether the site is suitable as a tailings repository.

The New World Mining District Response and Restoration project is nearing completion. Historic mine wastes have been excavated and placed in a waste repository. Underground mines have been sealed to eliminate mine water discharge. Near-surface mineralized areas have been sealed with an impermeable liner to minimize surface water infiltration. The majority of the mine cleanup has been completed over the last eight years. Future work regarding minor water discharges from underground mines and plans for long-term monitoring and maintenance of the waste repository are being discussed. With the completion of this project, we should see continued improvement of water quality in the years to come.

Constituency groups, media outlets, and members of the general public have worked with the agency partners on informing citizens and resolving these clean-up issues.

Plans/Actions:

<http://www.nps.gov/yell/parkmgmt/stateofthepark.htm>
<http://www.fs.fed.us/r1/gallatin>

THREATS TO BISON

Threat in 1995: Yellowstone bison, some of which are infected with *Brucella abortus*, the agent that causes the disease Brucellosis, roam outside park boundaries, generally during the winter. These bison may potentially transmit *Brucella* to livestock grazing outside the park which could jeopardize the “Brucellosis Free” status of states bordering Yellowstone. As such, the states view the presence of *Brucella* in park wildlife as a significant economic threat to the livestock industry. Animals migrate out of the park annually and some are destroyed, especially when bison population numbers are high and the winters are severe.

Outcome: In 2000, Yellowstone National Park, State of Montana, USFS, and the United States Department of Agriculture Animal and Plant Health

Inspection Service (APHIS) cosigned a joint bison management plan that agreed to conserve bison populations yet manage the risk of transmission from bison to cattle within the State of Montana. This is a long-term plan that should manage risks in the short- and medium-term, and set the stage for future discussions and actions about eradication of the disease. It is also an incremental plan that becomes more wildlife-friendly and yet lowers transmission risk to cattle with each incremental success achieved with plan implementation.

Status: This carefully crafted consensus-based plan has now been successfully implemented for seven years. While many people in the local and national conservation community do not support the plan, in the last five years the core Yellowstone bison population has been sustained between 3,000 and 5,000 animals, which are historic high levels for the population. In addition, the plan addresses each of the major issues regarding the risk of brucellosis transmission from bison to livestock. Highlights include: For the first time ever, non-infected bison captured at the boundary (winter of 2003–2004) were vaccinated against the disease and released back into the park instead of being destroyed. This effort continues to date. An Environmental Impact Study concerning the remote vaccination of interior herds was officially begun in 2004, and continues to be developed. In the past two years, 104 bison calves were removed from the population at the park boundary and placed in a research facility to devise a protocol that will allow APHIS to certify disease-free bison from Yellowstone to be used for starting new populations on other public, tribal, or even private lands, which would ultimately serve to enhance the long-term conservation interests of the species. In the winter of 2005–2006 the State of Montana initiated a “fair-chase” bison hunting season adjacent to the park. Discussions and research continue to consider additional ways to eventually eliminate brucellosis from wildlife in the Greater Yellowstone Area while maintaining wild and free roaming wildlife herds.

There is no shortage of public involvement with this issue due to the high regional and national profile bison have with the general public and numerous constituency groups. Most recently, an open house held in February 2007 drew over 100 participants to discuss issues related to the Interagency Bison Management Plan.

Plans/Actions:

<http://www.nps.gov/yell/parkmgmt/planning.htm>

<http://www.nps.gov/yell/parkmgmt/upload/yellbisonrod.pdf>

<http://www.nps.gov/yell/naturescience/bisonposters.htm>

THREATS TO CUTTHROAT TROUT

Threats in 1995: In 1994, voracious, predatory, non-native lake trout were discovered in Yellowstone Lake threatening the existence of the rare, endemic Yellowstone cutthroat trout, plus 42 other native birds and mammals that more or less depend on them for their own survival. It could also potentially destroy a sport fishery that once had a US\$ 36 million annual value. Largely as a result of this ecological setback, the Yellowstone cutthroat trout was petitioned for listing under the Federal Threatened and Endangered Species Act. In February 2006, the US Fish and Wildlife Service found that listing of the Yellowstone cutthroat trout was not warranted.

Outcome: Fish experts have concluded that the risk of functional extinction of the native trout was real, substantial, and urgent, but that no technology is known to completely eradicate lake trout from the lake. The best that could be hoped for was long-term suppression of lake trout, through the annual deployment of “industrial-strength gillnetting.” This partial solution was implemented by USNPS beginning in 1995, targeting the lake trout thought to have been in the lake and reproducing for about 20 years. A no-limit, no-live-release regulation on lake trout for sport anglers was also put into effect.

Status: Gillnetting fishing-effort and efficiency have increased each year and have resulted in the removal of almost 270,000 adult and juvenile lake trout. Catch-per-unit-effort (cpue) for lake trout declined dramatically in the early years of the program. Despite this effort, lake trout in Yellowstone Lake are still present in high numbers and evidence suggests that the population is continuing to expand. A new spawning site was discovered in 2006; 2004 saw the highest number of mature lake trout removed from the lake to date; and increasing numbers of smaller, immature lake trout have been removed for the last six years. The cpue during this time period, although still half of what it was in the late 1990s, has been creeping upward.

That said, suppression efforts are improving each year. Experienced crews have been able to use their knowledge of the lake, lake trout habitat and habits, and operations to both deploy more net and deploy it more efficiently each year, thus maximizing catch rate. By improving operation efficiency, crews have been able to increase the amount of net fishing eight-fold over initial years of the project. Catch-curve total mortality estimates, based on net catches of spawning fish, have averaged over 50% for both males and females for the last three years and the number of larger, older lake trout is greatly reduced from what would be expected without removal efforts. Night-time electro-fishing, added in 2004, continues to be an effective tool over lake trout spawning beds. These efforts are surely slowing the rate of expansion of lake trout in Yellowstone Lake.

The Yellowstone cutthroat trout population has been slow to respond, but is beginning to show signs of regaining strength. Numbers seen spawning this spring were again extremely low, but for the first time in several years, a few, small, first-time spawning fish were seen in several streams. The overall count of spawning fish in Clear Creek, the one stream we make a complete count in, increased over 10% from 2006, and more importantly also had an increase in first-time spawning fish. Our annual lakewide assessment showed the highest number of cutthroat trout seen since 1998. These assessments have shown a moderate increase in juvenile survival over the last few years concurrent with a very slow increase in spawning-aged size classes since 2002.

As with the bison, the Yellowstone cutthroat enjoys great popularity with the public and as such, the issue generates considerable citizen-agency dialogue. Public meetings were held in the spring of 2005 to discuss proposed changes in Yellowstone's fishing regulations.

Plans/Actions:

The NPS continues to focus its efforts on improvements and refinements in lake trout removal technologies to improve harvest efficiency, newer more efficient removal tools, especially those that would reduce personnel costs, and potential ways to mitigate the negative effects of whirling disease and drought on cutthroat trout.

<http://www.nps.gov/yell/parkmgmt/stateofthepark.htm>

<http://www.nps.gov/yell/planyourvisit/publications.htm>

<http://www.nps.gov/yell/planyourvisit/upload/laketroutrout.pdf>

<http://www.nps.gov/yell/planyourvisit/fishing.htm>

<http://www.nps.gov/yell/planyourvisit/fishreports.htm>

<http://www.nps.gov/archive/yell/tours/thismonth/aug2004/fish/index.htm>

(video clips)

WATER QUALITY ISSUES:

Threats in 1995: Yellowstone National Park hosts almost five million human use-days annually. Old, outdated waste water treatment plants, lift stations and underground lines, and older single wall fuel tanks were causing an unacceptable level of accidental overflows, ruptures, and spills affecting soils, ground and surface waters, degrading localized wild lands. In 1995, the failing wastewater treatment plant at Norris Village was closed upon recommendations of the U.S. Public Health Service.

Outcome: In the past five years Congress has appropriated \$22 million for water and sewage projects and special monies to replace all single wall fuel tanks in the park. These projects have reduced the backlog in this arena by approximately 30%.

Status: All of the park's fuel storage tanks have been replaced with new double-walled liquid tanks or replaced with more environmentally friendly propane gas tanks. Given the age of the fuel storage tanks that meet current standards, the park commenced with a program of replacing fifteen to twenty-year old tanks on a cyclic basis in 2005. A new wastewater plant has been constructed at Old Faithful and a new wastewater treatment plant, that exceeds environmental quality standards, went on-line at Norris in the fall of 2006. All deficiencies with wastewater lift stations have been corrected and monitoring/notification systems have been updated. The State of Wyoming - Department of Environmental Quality declared all deficiencies corrected in 2005. Older or problematic lift stations, lines, and grease traps have been replaced at many locations in the park and this work continues. A backlog of smaller deteriorated wastewater facilities remains, along with aged (pre-1966) distribution/collection systems in Yellowstone, and these will be replaced or updated in the future as funds are available.

All major construction projects in the park go through a formal public involvement process as required under the National Environmental Policy Act.

Plans/Actions:

<http://www.nps.gov/yell/parkmgmt/stateofthepark.htm>

<http://www.nps.gov/yell/planyourvisit/upload/strategicplan.pdf>

<http://www.nps.gov/yell/parkmgmt/planning.htm>

ROAD IMPACTS:

Threats in 1995: Yellowstone's road system was never designed for the volume, size, and weight of vehicles that travel through the park today. The park maintains 478 miles of roads of which 310 are paved and considered primary roads for the public. The remaining 156 miles are paved or gravel secondary roads for service and/or light public use. Road engineers, maintenance staff, and virtually all the visiting public considered the condition of the road system in 1995 deplorable.

Outcome: In partnership with the U.S. Federal Highway Administration, Yellowstone has an integrated, methodical and long-term program to improve the fabric of the park's roads and lessen unsafe conditions and unsatisfactory experiences for visitors, and prevent resource degradation.

An annually funded program of complete bed and/or surface replacement is expected to continue through the next two decades.

Status: Much has been accomplished since 1995 upgrading the existing road system, but it is a slow process because of the short summer construction season and the reality that reconstruction must be reasonably compatible with summer visitors. As noted above, the current program will be carried out annually into the 2020s, which should correct the structural deficiencies cited in 1995. The park also obtained an additional US \$900,000 in 2005 NPS base funding, and additional fee monies starting in 2006 for the cyclical maintenance of roads including the newly rebuilt roads which should assure better and more serviceable roads for many years to come.

All major construction projects in the park go through a formal public involvement process as required under the National Environmental Policy Act.

Plans/Actions:

<http://www.nps.gov/yell/parkmgmt/stateofthepark.htm>

<http://www.nps.gov/yell/planyourvisit/yellowstone-national-park-business-plan-july-2003.htm>

<http://www.nps.gov/yell/parkmgmt/planning.htm>

VISITOR USE IMPACTS:

Threats in 1995: Increasing visitor pressures on the natural and cultural resources of the park have been of concern to managers for many years. Recently, the park has hosted about three million visitors per year, which represents roughly five million visitor-use days annually. The quality of a visitor's Yellowstone experience in terms of sights, sounds and smells has also been extensively debated. Concerns have been raised most strongly regarding winter use in the park, but the crowds of the summer season are also a concern to many people. The number of visitors in the park, whether summer or winter, is a contentious subject with the US public who are divided between those who believe the park is overused, or that use is about right, or that the park could handle more visitors. The NPS Mission is to conserve the natural and cultural resources and to provide for the public enjoyment of the same in such manner as will leave them unimpaired for future generations.

Outcome: Winter use has been very controversial starting with a decision in 2000 to ban snowmobiles and replace them with snowcoaches, and then a 2003 decision to allow snowmobiling to continue under strict limitations. Litigation and decisions by two different Federal judges have

affected the decision making process. The NPS has just published the Winter Use Plans Final Environmental Impact Statement (EIS), which substantially reduces the daily maximum number of snowmobiles from historic highs (540 compared to 1,650 per peak day), requires the use of best available technology (which seeks to reduce emissions by 90% and noise by 25-50%) for both snowmobiles and snowcoaches, and require all travel groups to be accompanied by guides.

Status: The NPS believes the most recent EIS addresses winter use-related issues and the park's goals of protecting park resources, protecting employee and visitor health and safety, and improving the quality of the visitor experience. Under similar rules the last three winters, the park's air quality improved to the point that the park easily met federal air quality standards. The park was also considerably quieter, there was little wildlife harassment, and visitors enjoyed themselves. This EIS will reduce snowmobile numbers from 720 to 540 per day, mainly to protect park soundscapes better while also responding to public comment, two-thirds of which supported reduced snowmobile numbers. The NPS is hopeful that this plan (the fourth of its kind produced in the last decade) will withstand court challenges (the third one, although a temporary plan lasting only 3 winters, successfully did).

Spring, summer, and fall visitation has leveled off. Visitation peaked in 1995, dropped for several years, and finally reached the 1995 levels again in 2007. Visitor growth appears to have diminished as an issue in the eyes of many. Separately, the park has focused on development of partnerships to encourage more sustainability in visitor use. Several partnerships encourage use of alternate fuels for transportation and facilities or highlight hybrid automobiles for transportation. Another partnership is working to reduce solid waste, foster recycling, and grow into large-scale composting of organic materials. These partnerships should help the park and adjacent communities foster a region-wide approach serving visitors more efficiently and with less resource consumption in the future.

As all phases of the winter use issue have been part of formal public participation processes, either as an Environmental Assessment or EIS, this issue generates extraordinary levels of citizen involvement.

Plans/Actions:

<http://www.nps.gov/yell/parkmgmt/stateofthepark.htm>

<http://www.nps.gov/yell/planyourvisit/winteruse.htm>